Yale University

Forensic Developmental Disabilities Clinic

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July 30, 2020

Attorney Boris Bytensky
5000 Yonge St. #1708
Toronto, ON, M2N 7E9

Re. Alek Minassian (DOB: 11/3/1992)

Dear Mr. Bytensky:

At your request, two psychiatrists, Alexander Westphal, MD, PhD, and Viviana Alvarez-Toro, MD, and a psychologist, Rachel Loftin, PhD, from the Forensic Developmental Disabilities Clinic at Yale's Division of Law and Psychiatry evaluated Mr. Alek Minassian over the last several months. Below are brief introductions to each of the clinicians. We have also submitted our current CVs with this report.

Alexander Westphal, MD, PhD, is an Associate Professor of Psychiatry in the Division of Law and Psychiatry and the Yale Child Study Center, both based at Yale School of Medicine. He is a practicing physician with residency training in general psychiatry and fellowship training in both child and adolescent psychiatry, and forensic psychiatry. He is certified by the American Board

of Psychiatry and Neurology in all of these specialties. His clinical and research focus is on Autism Spectrum Disorder (ASD) with a particular emphasis on understanding the relationship between ASD and violence.

Viviana Alvarez-Toro, MD, is a Forensic Psychiatry Fellow at the Division of Law and Psychiatry at Yale School of Medicine. She is a practicing physician with residency training in general psychiatry and is certified by the American Board of Psychiatry and Neurology in general psychiatry.

Rachel Loftin, PhD, is a clinical psychologist who holds faculty appointments in the Psychiatry departments at the Yale School of Medicine and Northwestern University's Feinberg School of Medicine. Dr. Loftin is licensed as a clinical psychologist and has years of specialized training and experience in ASD. Her clinical research focuses on ASD and risk factors for criminal offending.

CONFIDENTIALITY AND CONSENT

Prior to each interview, Mr. Minassian was informed that he was being evaluated at the request of his counsel, Boris Bytensky and Brittany Smith, and not for the purposes of treatment. We informed him that we would communicate our findings with his counsel, that a report might be prepared, and that we might be asked to testify. He was aware that any information that he shared would be protected initially by attorney-client privilege, with the exception of information that indicated an immediate risk to himself or others. However, if he and his legal team decided to share the report with the court, the evaluation would no longer be confidential, and we might be asked to discuss all information covered in the interviews. Mr. Minassian indicated that he understood the purpose of the evaluation and the confidentiality status of our interviews, was able to repeat them clearly, and provided consent for us to proceed.

PURPOSE

Mr. Minassian is a 27-year-old single, white male who killed ten people and assaulted sixteen people by driving in multiple pedestrian areas in Toronto on April 23, 2018. We examined Mr. Alek Minassian at the Toronto South Detention Centre multiple times in December 2019 and

January 2020 and again in July 2020 via teleconference, as outlined below. In addition, we reviewed the documents listed below as well as several documents produced by Mr. Minassian's parents that outline his early history and their attempts to understand his actions. We interviewed Mr. Minassian's parents and asked them to complete measures of their son's behavior. The purpose of this evaluation was to assess the validity of his diagnosis of Autism Spectrum Disorder (established when he was a child), and to determine whether his history of developmental problems, and ultimately his violence, could be better understood.

RECORDS REVIEWED

1. Medical Records from Dr. Debra Birnbaum, Mr. Minassian's family physician, dating from 10/20/10 to 12/4/17
2. Medical Records from Dr. Gerald Friedman, Mr. Minassian's pediatric neurologist, dating from 8/8/8 to 12/19/12
3. Medical Records from Dr. Manny Greenberg, Mr. Minassian's pediatrician, dating from 8/1/96 to 4/29/09
4. Medical Records from St. Joseph's Healthcare- Hamilton dating from 7/30/18 to 2/10/18
5. Educational Records from Giant Steps and York Region District School Board dating 5/13/98 to 7/4/11
6. Educational Records from Seneca College dating from 2011-2018
7. Military Records from dating from 8/23/17 to 10/19/17
8. Correctional Facility Records from 4/24/18 to 7/17/18 and 9/28/28 to 2/7/19.
9. Ontario Superior Court of Justice Agreed Statement of Facts

In addition, we reviewed miscellaneous records from Mr. Minassian's Computer listed in Appendix 2.

INTERVIEWS

<u>Defendant Interviews</u>

1. Drs. Westphal and Alvarez-Toro interviewed Alek Minassian on 12/12/19 for 3 hours, on 1/17/20 for 6 hours, and on 7/15/20 for 1 hour.
2. Dr. Westphal interviewed Mr. Minassian on 12/12/19 for 2.5 hours and on 12/13/19 for 2.5 hours.
3. Dr. Loftin administered psychological tests to Mr. Minassian on 12/23/19 for approximately 3.5 hours.

In total, Dr. Westphal met with Mr. Minassian for 15 hours, and Dr. Alvarez-Toro was present and participated in the interviews for 10 of those hours. Dr. Loftin met with him for 3.5 hours.

Family Interviews

4. Drs. Westphal and Alvarez-Toro interviewed [redacted] and [redacted] ([redacted] Minassian, Mr. Minassian's parents, on 12/11/19 for 3.5 hours.
5. Dr. Westphal interviewed [redacted] and [redacted] Minassian on 2/6/20 for 1 hour, on 2/13/20 for 1.25 hours, on 2/18/20 for 1 hour, and on 7/28/19 for 30 minutes.
6. Dr. Loftin interviewed [redacted] and [redacted] Minassian on 2/7/20 for 1.5 hours.
7. Dr. Westphal interviewed [redacted] Minassian, Mr. Minassian's brother, on 3/9/20 for 30 minutes.

FAMILY HISTORY

Mr. Alek Minassian is a 27-year-old man who was born and grew up in Toronto, Canada. He was raised by his married parents, [redacted] and [redacted] ([redacted] Minassian. Mr. Minassian also has a brother, [redacted] who is three years older than him.

[redacted]

Mr. [redacted] Minassian [redacted] His family described him as "protective of Alek" and stated that the brothers had a good relationship; they would often spend time together playing video games or going to the movies. Mr. Minassian's parents said that [redacted] was more social than Mr. Minassian, explaining, "He doesn't shy away from large social settings." Prior to the incident, Mr. Minassian was living in his family home with both his parents and his brother.

Mr. Minassian's paternal and maternal families have a history of dementia. In addition, his paternal family has a history of depression. Mr. Minassian has first degree relatives with depression, attention deficit hyperactivity disorder, and Tourette disorder. He has no known family history of any developmental or psychotic disorder.

BIRTH HISTORY

Mrs. [redacted] Minassian had a normal pregnancy with no complications. She did not take any medications, drugs, or alcohol. She took a vitamin supplement called Materna. She delivered Mr. Minassian after a full-term pregnancy, several weeks after the estimated due date. She had a natural delivery and was given an epidural for pain management. Mr. Minassian's birth weight was slightly over 7 lbs.

DEVELOPMENTAL HISTORY

[redacted] and [redacted] Minassian, participated in an interview about Mr. Minassian's early history. The interview included the administration of the *Autism Diagnostic Interview, Revised* (ADI-R), as well as unstructured interviews about his history. The ADI-R is a comprehensive developmental interview that is a component of a gold standard evaluation for Autism Spectrum Disorder (ASD). The ADI-R can be scored using an algorithm, which gives categorical results in three domains: Language/Communication, Reciprocal Social Interactions, and Repetitive Behaviors/Interests. The following information is summarized from the ADI-R and discussions about Mr. Minassian's development with his parents.

Mr. Minassian's parents' descriptions of his early history and current presentation met instrument classification of ASD in the areas of Language/Communication, Reciprocal Social Interactions, and Repetitive Behaviors/Interests.

The Minassians described their son as someone whose behavior appears different depending on the setting. At a social event, for instance, it would be immediately apparent to people who were meeting Mr. Minassian that he was "different." He would present as awkward and unsure of what to do and say. On the other hand, in an encounter with a single person, when he is most comfortable and at his best, it takes some time in conversation before his challenges are apparent.

Mr. Minassian's parents reported noticing multiple deficits and delays in their son when he was growing up. In kindergarten, when other children were being taught to put on their own clothing, he required additional assistance. In addition, he would not go to the washroom until he was told to go, even when he felt he needed to go. His parents said, "It almost seemed like some kind of OCD where he insisted on being told before he would go." (This reliance on prompting or "prompt dependence" to initiate behavior is common among people with ASD.) He would also sometimes run out of the kindergarten classroom, or at home, run out of the front door.

Between approximately two to six years old, Mr. Minassian demonstrated poor problem solving by getting up and running out of the room when unexpected situations occurred. He ran out both in school and at home and often ran out into the street, which posed a significant safety risk. (This is consistent with records from St. Joseph's, which describe him running out of the house.)

DEVELOPMENTAL HISTORY: Early Development

Mr. Minassian's parents first became concerned about his social development in his infancy when they noted that he avoided eye contact and never initiated social interactions. Significant problem behaviors were also apparent quite early. When he was quite young, around 14 months, Mr. Minassian sometimes stood and beat his head against the wall. (This was also described in

hospital records from the time.) This behavior persisted for approximately a year and a half, until he enrolled in Kindergarten. His parents often placed their hands between his head and the wall to prevent him from injuring himself. Mr. Minassian's parents stated that, at times, he would also have "bizarre behaviors" such as licking tables.

Developmental milestones were largely within normal limits. Mr. Minassian walked before his first birthday and was toilet trained at age three. His parents highlighted that he always had difficulty with fine motor movement.

In kindergarten, Mr. Minassian was able to add 3-digit numbers and perform subtractions. He solved problems almost instantly. Also at that age, he could name the day of the week when provided with a calendar date. Mr. Minassian's parents described some regression in skills in early elementary school. By age eight, he was no longer able to do either 3-digit addition or find the day of the week when given a date. No regression in language or adaptive functioning was described.

DEVELOPMENTAL HISTORY: Communication Development

Mr. Minassian's speech emerged quite late. He had few words when he was three and a half years old and could use phrase speech when he was about four years old. (This is consistent with records from Dr. Greenberg and Dr. Friedman.) He received speech therapy for his speech delays.

As a young child, Mr. Minassian understood basic directions but was often "in lalaland" and had difficulty following adult direction. When his parents wanted to capture his attention, it was often necessary to get close to him and call his name. They attributed this to him "not being attentive to language."

Mr. Minassian demonstrated a number of signs of ASD in his use of language. The sound of Mr. Minassian's speech was described as monotonous. "He does not put emotions" in his speech, unless he is extremely excited about an area of interest, such as a video game. His parents explained that he asked the same questions over and over as a child, even after the question had

been answered multiple times. He also repeated phrases he heard others use, using the same phrase and tone. (This is known as "echolalia"). As recently as a few years ago, Mr. Minassian would say repeatedly, "Well, well, if it isn't Mr. _____" while looking in the mirror. He was also sensitive to others' wording. Mr. Minassian tended to "rephrase" his mother's speech if he did not agree with how she worded a phrase.

Mr. Minassian does not engage in much conversation. He will only talk with his parents and very close family members and, even then, he joins conversations only when they are related to a topic of interest. He hates small talk, does not seem to understand its function, and views it as one of the "unnecessary functions humans perform," according to his father. His parents stated that their son did not enjoy being complimented, and was even "annoyed" by it.
Mr. Minassian's use of gestures was described as unusual. His parents could not recall him pointing but remembered situations in which Mr. Minassian started talking about a distant object without first drawing their attention to it. It did not occur to him that they were not looking at the same thing as him, (which indicates difficulty understanding others' perspectives.) He sometimes shook or nodded his head to indicate yes and no, but he did not regularly do so. They described conventional gestures, both in early childhood and in adulthood, as awkward and occurring only when prompted or in response to others.

As a young child, Mr. Minassian was taught to look at people because he lacked social use of eye gaze. Now he reminds himself to look at people from time to time, and when he does, he may stare too intently.

DEVELOPMENTAL HISTORY: Play Development

Mr. Minassian did not imitate others as a young child, nor did he engage in pretend play. His parents recalled that he became focused on certain characters, such as Mr. Bean, and imitated him move-for-move. He did not play with peers. If children came over to the house, Mr. Minassian went off by himself. This report was consistent with Dr. Greenberg's records, which indicate that at age four, Mr. Minassian displayed deficits such as difficulty following instructions, following routines, and socializing with other children. It was noted that Mr.

Minassian was “quite involved in his own world” and would prefer to play alone, listen to music, and watch videos.

DEVELOPMENTAL HISTORY: Socialization Development

As a child, Mr. Minassian did not demonstrate much interest in his peers. He did not approach other children to play, for instance, although he typically responded when familiar children, such as family friends, approached him. By the time Mr. Minassian was in college, he only had one friend from high school with whom he kept in touch. In college, Mr. Minassian interacted with teammates from various group projects for classes, but he never made close friends. He continued meeting up with the friend from high school on occasion. Mr. Minassian’s parents would describe that their son is generally uncomfortable in social settings. In particular, he used to be shy and uncomfortable in the presence of girls or women. Mr. Minassian does not have intuitive social responses. He does not smile socially in response to others, for instance, and was taught by his parents to expand upon his stock response of “good” when the neighbors asked how he is doing.

Mr. Minassian does not spontaneously show things to others. His mother noted that he has “probably shown her two things in his entire life.” When asked about sharing, Mr. Minassian’s parents explained that he is not possessive, but it does not occur to him to offer to share things with others. This is evidence of a deficit in social cognition. When others are hurt, sick, or ill, he will not notice or understand when he needs to be concerned. Mr. Minassian’s parents recalled one occasion when [redacted] Mr. Minassian’s brother, was ill and needed to be taken to the hospital. Despite the fact that parents know Mr. Minassian cares about and loves his older brother, he did not react to the family’s concern about Haig’s health and did not offer to help. They stated, “Alek never got up to see if he should do something. He felt like someone was on the job and there was nothing practical for him to do.”

Mr. Minassian has a history of difficulty inferring what to expect in situations, along with poor problem-solving skills. His mother described a time in elementary school when he intentionally spelled each of his spelling words incorrectly on a test because he wanted to see what would happen. His parents described his facial expressions as limited and stated that his face is

normally “blank.” Mr. Minassian was said to frown, smile, and look puzzled. His expressions are rare, but when they occur, they typically fit the situation.

DEVELOPMENTAL HX: Restricted Interests, Repetitive Behaviors, Sensory Differences

Mr. Minassian was not described as having any highly unusual interests. He did, however, have more typical interests that were unusual in their intensity. Mr. Bean, as previously noted, was an area of fascination. Mr. Minassian memorized and imitated his shows. Mr. Minassian was also preoccupied with a disco dance instructional video. When he was approximately seven years old, he memorized the instructor’s role and could perform the entire video. He was also preoccupied with different video games over time and when he was interested in a certain game, it was as if other games did not exist. Mr. Minassian’s parents stated, “He often latches on to something and that is his mission for the next couple of days… It’s like he’s out in space and he has a mission that must be completed at all costs.” In the medical records, obsessions with video games and the Bible were described.

Mr. Minassian’s parents did not describe the repetitive use of objects, but they reported that he performed unusual routines. Mr. Minassian refused to eat toast with holes in it. Instead, he cut toast into small pieces so that any holes were no longer evident. When he was asked to set the dining table, he insisted on placing spoons and forks face down so that he would not see the concave surface. If someone else were to set the table, he turned the utensils over. Mr. Minassian’s fear of concave surfaces is part of a bigger phobia. He is afraid of echoes and infinite reflections, such as when two mirrors face each other. When using a public restroom, for instance, Mr. Minassian was described as slowly peeking in to see whether the mirrors were arranged across from each other and, if so, he looked directly at the floor while quickly walking past them. The feedback sound that can occur in video conferencing software was another fear of his. Mr. Minassian was reluctant to use video conferencing software as an adult because of the risk of the echo.

Other unusual and rigid routines were also described. Mr. Minassian ate the same café lunch each day and refused to try new places. Mr. Minassian’s parents said he refused to eat in restaurants with one of his friends, although he would eat out with his family. They also reported

that, even as an adult, Mr. Minassian was unable to speak with female waitresses and would have to resort to having his parents order food for him. As a young child, Mr. Minassian insisted on wearing green clothes. He also had a phase of constantly using hand sanitizer.

Mr. Minassian responds well to schedules and likes having a "heads-up" regarding upcoming events so as to not be surprised. He has always been resistant to change and requires warnings. Even now, he requests advance notice before anyone from the legal team visits. Mr. Minassian has a history of motor tics. He has never had hand-flapping or whole-body rocking movements.

Mr. Minassian's parents reported that, throughout much of his life, Mr. Minassian would frequently ask a certain type of question in the form of "What would happen if…..?" For example, he asked: "What would happen if [he] traded knee caps with [his] father?" "What would happen if he changed the fire risk indicator to high?" "What would happen if [he] pretended to have a gun at the airport?" seemingly because it was difficult for Mr. Minassian to envision different scenarios or understand their consequences.

Mr. Minassian's parents reported that their son was never violent and was never cruel to animals or manipulative. They described him as "gullible," "gentle, and non-confrontational."

EDUCATIONAL HISTORY

Mr. Minassian attended ARS Armenian School for preschool, Mrs. Druv's private Montessori school for junior kindergarten, and Doncrest Public School on Blackmore Ave in Richmond Hill for senior kindergarten.

In March 1998, Mr. Minassian was admitted to Giant Steps Toronto, a specialized elementary school for children with Autism Spectrum Disorder. He was described as having difficulties with "social pragmatics" such as interacting with other peers. It was documented that, while playing, Mr. Minassian performed some "aggressive acts" with his toy figures. In addition, he was particularly interested in certain topics such as "elimination and washing."

Records from Giant Steps highlight that Mr. Minassian had some difficulties with language; often overlooking certain relevant information when asked to tell a story or failing to engage in

social situations. Mr. Minassian had difficulty recalling events, often omitting contextual information that was not meaningful to him, without recognizing that it helped others understand what he was talking about. In addition, it was documented that, "Alek has many abilities that are not carried over to everyday situations; The reasons for this are unclear." Mr. Minassian also had some physical limitations, particularly struggling with coordination and balance.

With time, it was noted that Mr. Minassian showed improvement in all areas; he was able to follow class work with few modifications and interacted with peers, sometimes attempting to engage in social play. He continued to struggle with understanding the meaning of body language and implied meanings of expressions. He was particularly confident in math class and was able to raise his hand to participate in class.

Mr. Minassian was eventually transitioned over to attend 16th Avenue Public School with decreased assistance from Giant Steps staff. He began to display "highly disruptive sexualized language and behavior" and was referred to individual and family therapy. While in therapy, Mr. Minassian explored themes of morality and fairness. He would also "act out aggression" during play therapy.

Mr. Minassian graduated from Giant Steps in 2002 and during testing performed in May 2002, Mr. Minassian continued to show deficits in complex language skills such as abstracting meaning and drawing inferences. In addition, his prosody style was found to be "confusing to the listener."

A 2005 Behaviour Team Referral Form for a "Social Skills" class described Mr. Minassian as afraid of females. He was quoted repeatedly saying "I'm afraid of girls" and "don't hurt me" as he would walk by female students in school. It was noted that these fears did "not appear to be genuine" but "negative attention seeking."

Mr. Minassian attended Thornlea Secondary School for his high school studies. His student transcript showed that most of his grades were Bs and Cs, although he had several As and Ds. Dr. Friedman's medical records indicate that in April 2009, Mr. Minassian was in an "Asperger's class" in school and that he was "socially doing well." (Asperger Disorder is a defunct diagnostic category subsumed into the Autism Spectrum Disorder diagnosis.)

Mr. Minassian attended Seneca College from 2011 to 2018 pursuing a degree in software development. Records from Seneca College indicated that he completed seven semesters but due to "personal issues" chose to withdraw from his eighth semester. His college transcript shows that his studies were interrupted after the Fall 2015 semester. He continued his studies in the Winter of 2016 but failed his courses. He re-enrolled for the Winter 2018 semester in order to complete the final three courses required for graduation. He completed all requirements for graduation with a cumulative GPA of 3.5

A component of the discovery information was a group of documents listed in Appendix 2 below. These included multiple essays he wrote during high school. Several of these were focused on criminal law topics. When asked about the school essays that address issues of legality and morality, Mr. Minassian explained that these were assignments he completed during a law course he took in the eleventh grade. Mr. Minassian stated, "I wasn't doing homework on my own. A lot of the stuff that I wrote wouldn't have been 100% my idea. The teacher would give me hints about what to write." He also added that he would often "paraphrase what the textbook said" when completing these assignments because he knew that would be the correct answer. Mr. Minassian explained that his parents and teachers would often help him complete his assignments in "any subject other than math," given his difficulties. Marked differences can be observed in his writings in terms of both content and structure, perhaps reflecting the help that Mr. Minassian received while writing his assignments.

MEDICAL & PSYCHIATRIC HISTORY

Mr. Minassian has a history of Autism Spectrum Disorder, Tourette's Syndrome, Thalassemia Minor, and Pilonidal Abscesses requiring surgical intervention. He also had surgery to remove four wisdom teeth. Mr. Minassian was diagnosed with Pervasive Developmental Disorder at age 5 at the Markham-Stouffville Hospital. His diagnosis of Tourette disorder captures the repetitive movements (e.g. tongue thrusting) we observed during our examination, but these behaviors could equally be attributable to ASD. Mr. Minassian's parents denied a known history of sexual or physical abuse but stated that he was a victim of bullying while in school.

Dr. Friedman's medical records indicate that Mr. Minassian first visited his office on 8/8/08 due to a complaint of "tics." Mr. Minassian reported that his tics began about one year prior to the

evaluation, when he was approximately 14 years old. With regards to motor tics, Mr. Minassian reported having neck, shoulder and arm movements in addition to mouth opening and neck stretching. Mr. Minassian also reported some obsessional behaviors such as spitting into his hands and picking his nose. He denied any vocal tics at the time. In order to treat his tics, Mr. Minassian was started on a low dose of clonidine.

During subsequent visits, Mr. Minassian also reported a history of vocal tics—grunting and throat clearing. Mr. Minassian reported that his tics worsened with anxiety.

In 2010, it was documented that spitting had become a "huge problem" for Mr. Minassian. In addition, Dr. Friedman described the tics as "socially disabling." Despite being treated for approximately two years, Dr. Friedman noted "overall no improvement" in Mr. Minassian's tics, which led Dr. Friedman to recommend adding another medication, aripiprazole (an antipsychotic medication). Mr. Minassian's symptoms improved significantly with aripiprazole, but experienced significant side effects from the medication.

In 2012, Mr. Minassian's tics continued to be well controlled on aripiprazole and clonidine and all medications were discontinued. Between this period and the index event and his subsequent incarceration, there was no medical or psychiatric history of note. Correctional and medical records from St. Joseph's Healthcare note that, shortly after being incarcerated, Mr. Minassian ingested soap at the Toronto South Detention Center in an attempt to commit suicide.

OCCUPATIONAL HISTORY

Mr. Minassian did volunteer work while in high school, as required by his school curriculum. His volunteer work included tree planting, working at a food bank, and some office work. He initially required additional support in order to be able to fulfill his obligations.

While in college and through school, Mr. Minassian held a part time job related to his field of study. Mr. Minassian's parents did not have much information on his job performance, but reported that Mr. Minassian had told them that it was a good learning experience and that it had gone well for him.

In addition, Mr. Minassian's parents reported that he "did a co-op work term" at a company called OMERS, as a part of his college requirements. Although they stated that they did not have any specific knowledge about his performance, they reported that students must fulfill the requirements of the job in order to satisfy the degree requirements at the school. Mr. Minassian successfully obtained credit for this work.

Mr. Minassian's parents reported that Mr. Minassian had a full time job at a company called Toogood Financial Services from May through October 2016. He was terminated due to his performance. At this time, Mr. Minassian had attempted to rent his own apartment, but after losing his job, he decided to join the military instead. This is discussed below. Mr. Minassian started applying to jobs while finishing his college degree. At the time of the event, Mr. Minassian had accepted a job offer with a firm doing software development.

MILITARY HISTORY

In 2017, Mr. Minassian joined the military for a short period of time. Military records indicate that, on 5/31/17, Mr. Minassian accepted an offer with the Canadian Forces Recruiting Center in Toronto. In September 2017, Mr. Minassian requested voluntary release from the Canadian Forces due to "difficulty adapting to the military lifestyle" and citing it was the "wrong career choice." In the Voluntary Release Request, Mr. Minassian wrote: "I vastly underestimated the discipline and exactness required for BMQ. I was thinking about it for a week and kept trying to mentally adjust but am just unable to keep up with the work or handle the stress." Mr. Minassian was officially released from his military duties on October 25, 2017. Mr. Minassian's Canadian Forces Certificate of Service indicates that he served continuously with the Regular Force from August 23, 2017 to October 25, 2017 and received an honorable discharge.

Mr. Minassian's parents reflected on his decision to join the military. They stated, "It came as a complete surprise" as their son had not expressed this interest in the past. They noted that once he decided to join, he seemed very determined to succeed; he spent a significant amount of time exercising in preparation for Basic Training. They highlighted that one aspect that was "puzzling" to them was that, although he was training by running and lifting weights, he did not

seem at all interested in learning how to swim, which he knew was a required component of Basic Training. His parents had to encourage him to take swimming lessons and told him: "If you have decided to join and are spending so much time training, it does not make sense to ignore a required component." As a result of this conversation, Mr. Minassian agreed to learn how to swim.

FAMILY HISTORY

According to Mr. Minassian's parents, Mr. Minassian's brother had a history of Tourette's Syndrome and Attention Deficit Hyperactivity Disorder (ADHD). Mr. Minassian's maternal great-grandmother had a history of Alzheimer's disease. In addition, Mr. Minassian's paternal aunt had a history of depression. They also reported that Mr. Minassian's paternal grandmother had dementia and was "seeing things" towards the end of her life. Mr. Minassian's parents denied any family history of substance use disorders. They also denied a history of genetic disorders. According to Dr. Birnbaum's medical records, Mr. Minassian's brother had a history of Tourette's Syndrome that remitted as he grew older. According to Dr. Friedman's medical records, Mr. Minassian's brother had a history of tics and his father and grandmother had a history of Obsessive Compulsive Disorder (OCD).

SEXUAL HISTORY

Mr. Minassian stated that he had several romantic interests or "crushes" while in school, starting when he was in the seventh grade. He stated that he was only interested in girls that were in his same classes. He explained that he developed an interest in a girl while he was in the eleventh grade because she sat in the seat in front of him. Similarly, he became interested in another student because she was the only girl in his learning strategies class. Mr. Minassian explained that he did not approach the female students he was interested in, never told them how he felt, and often "acted afraid" of them in an exaggerated manner. [redacted] added, "I did imagine things, but I knew realistically that nothing would happen."

Mr. Minassian stated that once he went to college, he did not have specific romantic interests given that there were "never more than three female students in class and they were older anyway." He added, "My mind wasn't on a crush." Nevertheless, Mr. Minassian stated that at that time, he was interested in having a girlfriend. He reported being interested in "puppy love, not necessarily sex" and would envision himself holding hands with a potential girlfriend.

When asked about his sexual interests, Mr. Minassian stated that he is exclusively interested in same-age adult women. [redacted]

PARENT INTERVIEWS

In addition to the information which Mr. Minassian's parents gave above, they also discussed aspects of his history and personality which didn't fit into previous categories. These are discussed below.

Mr. Minassian's parents spoke about idiosyncrasies in their son's behavior and interests. They spoke about how, ever since he was a child, he would often focus and spend most of his time on one particular interest at a time. When he was in college, they recalled that he decided "out of the blue" to change his major to Chemistry. He explained to them that his college website had been promoting Chemistry, so he decided to major in it, despite not having any prior interest or ability in the field. His parents were able to dissuade him from changing his college courses. Similarly, on one occasion, Mr. Minassian unexpectedly mentioned that he was interested in signing a lease for a particular apartment and left the house riding his bicycle in order to do so. He returned hours later, after not being able to find the apartment, realizing that it was dark out and that the apartment was actually very far from his home. His parents were able to convince him that leasing the apartment would not be a good idea.

Mr. Minassian's parents also highlighted how their son had difficulty understanding what was socially expected from him. On one occasion, as part of a group project, he had to give an oral presentation. After Mr. Minassian had concluded his portion of the presentation, he sat down and began playing games on his computer. Despite being reprimanded for his behavior, Mr. Minassian could not understand "what the issue was."

When asked to reflect on the April 23, 2018 incident, Mr. Minassian's parents expressed a great deal of shock. They described Mr. Minassian as "gentle" and "content," and stated that he had never had issues with violence. They added, "he had a small world… his homework, video games…" They recalled events when other students "bullied" him and would mock him publicly, but Mr. Minassian never retaliated. Mr. Minassian's teachers told his parents that even while being bullied, he would often comply with what he was being asked to do in a calm and gentle way.

Mr. Minassian's parents stated that he had been doing very well in the weeks leading up to the attack; he was excited and "upbeat" about starting his new job and was making plans for the future. They stated he had mentioned wanting to "catch up" with his brother, buy a car, and expand their driveway to accommodate the car in anticipation of his new job. They also stated that they did not perceive any differences in their son's demeanor prior to the attack. They reported that Mr. Minassian is not usually able to hide his feelings, particularly when he is upset. They were surprised to note that they had not seen him behave any differently in the days leading to the event. Mr. Minassian's father described this experience as, "It is like getting hit by lightning on a sunny day."

Mr. Minassian's parents also stated that Mr. Minassian's statements to the police were not based on his own life experiences. For example, they did not believe that their son could have been capable of attending a party and asking a woman out on a date. They confirmed that their son would never look at women while out in public and would be too shy to speak to a female waitress, if they were out at a restaurant. Mr. Minassian's parents reflected on the content of Elliot Rodger's manifesto and stated, "Everything he says [to the police] is straight out of the manifesto, word by word, sentence structure... they were not his words." They also commented on Mr. Minassian's demeanor and speech style during his police interview: "That's not Alek, it's

like acting." They elaborated and stated that Mr. Minassian's speech during his interrogation did not reflect his usual conversation style, but instead how he would "perform" when asked to do school presentations.

Mr. Minassian's parents also spoke about several issues that occurred after his arrest that they believe highlight Mr. Minassian's deficits and inability to understand his current situation. During a conversation with their son, while in prison, Mr. Minassian asked his parents about his grades for his last semester and inquired about whether or not he had graduated. Similarly, he asked his parents about what he would have to do about his taxes, given that he was incarcerated. They reported that when told about his trial date, Mr. Minassian was optimistic and stated, "Everybody will see that I didn't do anything wrong and I'll be able to go home soon."

In addition, Mr. Minassian's parents spoke about how their son is easily influenced by others. They stated that another inmate mentioned to him that he was part of The Rosicrucian Order and consequently, Mr. Minassian became "focused" on this topic and asked his parents to research it for him. In addition, a chaplain offered him a Bible, and he has now begun memorizing Bible verses, reading different versions of the Bible, and looking for inconsistencies between them.

STIPULATED VERSION OF THE EVENTS

On April 4, 2018, Mr. Minassian called Ryder Rental Company and reserved a "10 foot gas cargo panel van" for April 23, 2018. On the day of the event, Mr. Minassian's father dropped him off at a nearby store. Mr. Minassian proceeded to walk over to the Ryder Rental Company. Once there, it was noted that Mr. Minassian "seemed nervous and a little bit jumpy." When asked by the Ryder employee, Mr. Minassian provided valid identification and a credit card. In addition, he stated that he would put "furniture" in the vehicle. Mr. Minassian was given a van instead of a "truck," but he agreed to proceed with the rental.

Mr. Minassian drove away from the Ryder Rental Company location and headed south towards downtown Toronto. When Mr. Minassian arrived at Yonge Street and Finch Avenue West, he saw pedestrians on the sidewalk and decided to "begin his mission."

Mr. Minassian proceeded to drive on the street and on sidewalks, targeting and striking multiple pedestrians. At some point during this or immediately prior, he posted a message on his Facebook account which read:

> Private (Recruit) Minassian Infantry 00010, wishing to speak to Sgt 4chan please. C23249161. The Incel Rebellion has already begun! We will overthrow all the Chads and Stacys! All hail the Supreme Gentleman Elliot Rodger!

He finally stopped the van on a sidewalk of Poyntz Avenue after traveling for 2.57km. Mr. Minassian stepped out of the van and a police officer approached him, asking him to "get down." Mr. Minassian refused to do so and yelled, "I have a gun. Kill me now! Kill me now! Shoot me." Mr. Minassian proceeded to point an object at the officer, mimicking holding a gun. At this point, the officer approached him with a baton leading Mr. Minassian to surrender. Mr. Minassian was arrested and then driven to the police station.

Upon arrest, Mr. Minassian was asked about his medical history and Mr. Minassian volunteered, "I am a murdering piece of shit." He was later interviewed by the police, and Mr. Minassian gave a lengthy confession about the incident. Mr. Minassian was charged with ten counts of First Degree Murder and sixteen counts of Attempted Murder.

DEFENDANT'S VERSION OF THE EVENTS

During our interviews, Mr. Minassian gave a detailed account of the events that occurred on April 23, 2018, as well as in the two months before. Several weeks prior to the index crime, Mr. Minassian booked a van with the intent of using it as a weapon to kill as many people as possible. He had been contemplating this plan for approximately two months. He chose April 23, 2018 because it would be the first Monday after he concluded all his college courses, and it was before he was scheduled to start his new job. Mr. Minassian said the timing fit into his schedule. Mr. Minassian stated that once he made the decision to go forward with his plan and book the van, he held himself accountable and felt like he "had to go through with it." He recalled focusing on this objective, ignoring other thoughts that might dissuade him from going through with the plan. Mr. Minassian planned the details of the attack for several weeks,

outlining the route from his house to the Ryder truck rental location, and then to downtown Toronto, where he would target pedestrians. He said, "I knew beforehand that the targets were random… I figured my best bet would be to go random."

Although Mr. Minassian stated that he would "go through" with his plan, he also made other plans that were inconsistent with him carrying through with the attack. Approximately one week prior to the event, Mr. Minassian had conversations with his family about needing to buy a car once he started his new job. He discussed the possibility of expanding their driveway so that he would have space to park his car. Similarly, he made plans to go out to dinner with his brother in order to celebrate his upcoming graduation and new job.

The morning of April 23, 2018, he woke up, had breakfast, and began working on his computer, completing some human resources requirements for his upcoming new job. He had booked the van for 1pm and thought it would be productive to use his time completing the requirements for his new job. Mr. Minassian explained that he chose to complete these requirements in case his plans for the attack fell through. Mr. Minassian's father stated that his son told him that he would come back home to finish the remaining paperwork when he returned home in the afternoon.

Mr. Minassian told his family weeks before the event that he was planning on meeting a friend at a Starbucks on April 23, 2018. He explained that he had tried to meet with this friend in the past but had to reschedule. Mr. Minassian said he believed his parents would not suspect anything unusual by telling them he would meet this friend. Mr. Minassian had planned to take public transit, but that morning, his father offered to drive him instead. Mr. Minassian accepted this offer and his father dropped him off at a Starbucks that was close by to the Ryder van rental location. He proceeded to go inside the Starbucks and notified his father that his friend had arrived. His father drove off and Mr. Minassian walked over to Ryder. Arriving earlier than the scheduled 1pm time, Mr. Minassian said he was worried that a vehicle would not be available. He checked in at the counter and spoke with an employee. He chose to rent the van "for 24 or 48 hours." Mr. Minassian was not able to elaborate on why he was concerned about having the van for more than one day if he was not planning on returning it but stated that he wanted to make sure he had enough time.

Once in possession of the van, Mr. Minassian drove towards the downtown Toronto area. He drove directly towards Yonge Street, because it was a heavily populated area: "I wanted it to be a busy sidewalk in Toronto." Mr. Minassian said that originally, he had intended to go further south to a more populous area, but when he arrived at the intersection between Yonge and Finch, he saw many people walking and "decided to go for it." He recalled having "second thoughts" when he initially reached the intersection and wondered if he could go through with his plan. Mr. Minassian stated that immediately prior to the attack, he submitted a post on his Facebook account (cited above.) He explained that he had typed this message earlier in the day but posted it while he was in the van. Mr. Minassian explained that he was referencing various online "fringe" groups, and in particular, Elliot Rodger, who had performed an attack in 2014.

Mr. Minassian then began targeting random individuals that were walking on the sidewalk. He continued to drive trying to reach as many people as possible. He could not elaborate on his particular thoughts or emotions at the time, but stated that he was "hyperfocused." At one point, a victim's drink splashed on his windshield, limiting his visibility, and interrupting his focus. He said that at that moment, he "panicked" and became concerned about losing control of the van and crashing. He denied being afraid of losing his own life. Soon after, he recalled hearing police sirens and decided to stop the van. He got out of the van, holding up his wallet in a way that mimicked holding a gun. He pointed at a police officer with his wallet and asked to be shot, but the police officer did not. Mr. Minassian stated that once he realized the police officer was not going to shoot him, he gave up and allowed the police officer to handcuff him.

When asked, Mr. Minassian explained that he did not bring a firearm due to fears of being detected. He explained that, if he were to be searched at the Ryder location prior to his rental, he would have raised suspicions and feared that he would have been unable to continue with his plan. Mr. Minassian was unable to reflect on how unlikely it would have been for him to have been searched by a van rental company employee. He stated he "wanted to get this done as quickly as possible."

Mr. Minassian stated that, at the time of the crime, he was not fearful of death, and expected to die. He was not able to give a comprehensive explanation about why he was seeking to die in the process, but stated that his intent was to be shot by a police officer in order to avoid

incarceration. When exploring this theme, Mr. Minassian was only able to give circular and repetitive arguments as to why he needed to die. He seemed to tie the success of this event on whether or not he had been killed, but stated that this was not a suicide attempt. When asked, he was unable to explore themes of the consequences of his death, such as his potential afterlife, saying, "I didn't think of that."

Mr. Minassian stated that after he was arrested, he was brought into a police station. When asked why he had killed several individuals, he responded to the police, "I'm a murdering piece of shit." When we asked about his word choice, Mr. Minassian stated that he said it for "dramatic" purposes and believed he might have heard the phrase before, but could not recall where. Mr. Minassian said that this was a spontaneous statement and that he had not planned on talking to the police, given that he assumed he would die during the attack. He added, "I didn't care what I told the police, it was just a way to get media attention."

When asked about the identity of his victims, Mr. Minassian stated, "I've avoided thinking about that… If I continue thinking about the same thing over and over again, it would stress me out ." Nevertheless, Mr. Minassian recalled the number of individuals who died and who were injured during the event. Although he was not familiar with the names of all the victims who died, he was aware that eight were female and two were male. He said that he had not intended to hurt more women than men and again confirmed that his victims were "random." He was able to compare the number of victims in his case with those of other mass killers. He spoke of statistics that he has memorized from Encyclopedia Dramatica, where such information is listed.

Mr. Minassian acknowledged thinking (at the time of the interview) that the victims who had survived and all of the victims' families would be "upset" about what had occurred, but stated, "I would be surprised if anyone would look for revenge." He focused on how the families of victims who were deceased would be upset given that their loved ones were no longer alive. Similarly, when asked about the effect on victims, Mr. Minassian stated, "I knew there were survivors... I was imagining if I was in the hospital with broken bones, I would be inconvenienced or uncomfortable." He did not make any comments about the effect of an individual losing their own life.

When asked about the effects of his actions on his own family, Mr. Minassian seemed somewhat surprised by the question. He then stated that, emotionally, his family would be affected "100%," because of what he had done and the fact that he was no longer at home with them. He added that, in terms of his family's "daily life," they would be affected "5%." He stated that they can "move on" given that they have jobs and would not be financially affected by the situation. He could not anticipate any other way in which his family's daily life might be affected by his actions.

When asked about the motivation to carry out this attack, Mr. Minassian said that he had several reasons. At various points during the interview he identified several themes: he had an interest in mass shootings, felt lonely, identified with Elliot Rodger, had a desire for notoriety, and was anxious about failing socially at his new job.

Mr. Minassian said that he first became interested in mass shootings and websites such as 4chan when he was in high school. He identified with many of the shooters, particularly since he shared a history of isolation from peers: "At first, I didn't think of killing, but I could identify [with them] because they were rejected." Mr. Minassian said that during his high school years he sometimes fantasized about becoming a mass shooter and on occasion had thoughts of suicide. Mr. Minassian reported having very few friends while growing up and stated that he often felt isolated. He also recalled episodes of "verbal bullying" where other students would ask him to say certain words repeatedly in order to mock him. He reported feeling "hurt" during these occasions but denied ever feeling "angry." He stated that he never felt motivated to seek revenge. When asked about why he did not target individuals who had bullied or rejected him, Mr. Minassian said he was trying to be "stealthy" and did not think he would have had the ability to conduct such a deliberate attack.

Mr. Minassian stated that he believed his social situation would improve in college, but he still found himself alienated. He mostly kept to himself and would only speak to a few people who would approach him first. During his college years, he reported having one friend who he had met years before. They would usually spend time together playing video games and would occasionally go out to see a movie. Mr. Minassian was interested in women and was "upset [he]

wasn't in a relationship." Overall, he continued to feel lonely and was not optimistic about the prospect of starting a new job with new social challenges.

In 2016, when Mr. Minassian was in college, he became more familiar with online "fringe" groups such as the *incels*, or involuntary celibates. He found out about Elliot Rodger and became "fixated" on his "manifesto." He explained that he identified with some of the themes Mr. Rodger wrote about in his manifesto. He clarified that he did not identify as an *incel* himself, but also felt rejection and loneliness. He recalled feeling a sense of "excitement" when reading the manifesto because he knew that Elliot Rodger had been able to carry out his mission. Mr. Minassian stated that he particularly enjoyed the way individuals in websites such as *4chan* and *Reddit* communicate, given that they are blunt and express their beliefs clearly. He clarified that he did not particularly identify with much of their belief system, and explained how his political views differ from many in these online groups.

Mr. Minassian reported using Elliot Rodger as a way to increase the sensationalist value of his own mass killing. He added, "I specifically copied him because I felt like nobody would know me." Mr. Minassian first referenced Elliott Rodger on the Facebook post he published while carrying out his attack. Later on, when being interrogated by the police, Mr. Minassian reported a series of events that led him to commit the mass killing. After this interrogation, Mr. Minassian stated that he had copied some elements of Elliot Rodger's manifesto and reported them as his own experiences. For example, during Mr. Minassian's interrogation, he reported to the police that he had been rejected by a woman at a college party, sparking anger and feelings of revenge against women and attractive men. The same event was described by Elliot Rodger in his manifesto, which Mr. Minassian admitted copying. He stated that he did this because he felt that this explanation would be more "sensationalist" and would attract more media attention. He also believed that he would gain notoriety amongst the different "fringe websites" and online communities that he was interested in. He explained that websites such as Encyclopedia Dramatica rank mass killers according to their "kill count." He was aware of how he ranked among other notorious mass killers such as Elliot Rodger, Christopher Harper-Mercer, the Columbine shooters, and the Virginia Tech shooter.

Mr. Minassian said he wished for notoriety, "for attention… it would overshadow everything else I've done." He reported having failed at several things throughout his life—academic and social: "At the time, I didn't have much to live for." He added that he believed that he could never be truly successful in having normal relationships or a normal life, and desired to gain notoriety for doing something that he knew he could accomplish.

Mr. Minassian explained that he believed that anticipatory anxiety about his new job precipitated the violence. He feared being rejected and embarrassed due to his poor social skills at work. He anticipated not being able to relate effectively to his coworkers; "It would have been very embarrassing failing socially, I would have had to see them every day." When asked about why this fear of potential embarrassment would affect him so much, he replied, "Maybe most people don't care about it because they haven't failed repeatedly… I knew I would have had challenges." Mr. Minassian was aware of how his Autism Spectrum Disorder diagnosis related to his social difficulties. He said, "I know people with autism think differently. I know being on the autism spectrum makes social interactions more difficult so that correlates with loneliness, lack of social interactions, and the nervousness about the job."

Mr. Minassian said that the attack was out of character for him. He stated, "Other than the incident, I haven't done anything." He denied any prior history of violence and noted that overall, he did not harbor negative feelings towards others. He had difficulty describing his emotional range and was only able to give superficial examples regarding what kind of events would elicit certain feelings. Mr. Minassian explained that it is difficult for him to predict what emotion will arise from a situation but said that once he is having an emotion, he is able to identify it. Although Mr. Minassian recognized feeling a "sense of readiness and happiness" when he rented the van and a sense of "nervousness" when he was driving. He was not able to identify any particular feelings associated with the killing of his victims. He recalls being "hyperfocused," but was unable to explain any further.

When asked to reflect on the morality of his actions, Mr. Minassian said, "I certainly have committed the act of murder and there isn't any moral justification for it so, for the public eye, it would be extremely upsetting and immoral." When addressing whether his history of ASD could have played a role in his actions, Mr. Minassian said that he believed it could have

contributed in various ways. He acknowledged that his autism had a significant impact on his social skills and consequent social isolation from peers. He reported believing that he would have been happier if he would have had the capacity to engage with others in a successful way. In addition, he stated that he believed his anticipatory anxiety about his upcoming job was heightened because of his fear of continued social rejection. He was unable to show any flexibility when asked about different solutions to his problems.

Mr. Minassian was ambivalent about whether or not he would modify his actions, if given the opportunity. He expressed some regret that he was now incarcerated and missed certain aspects of his freedom--playing video games, using his computer, spending time with his friend, and being able to take out food from his fridge. He expressed feelings of satisfaction regarding his actions; he said he believed they had yielded him notoriety.

He explained that the notoriety was amongst *incels* and other *betas*, people who were socially marginalized. He was unable to explain how he knew this, given that he has no access to the internet. Ultimately, he said that he didn't know this for sure, but assumed it was the case because there was extensive news coverage of his attack. When asked why it was so important to him to be notorious with this group, especially given that he didn't know any of them, and furthermore, that he doesn't even identify as an *incel*, he did not have an answer. Of note, correctional records show that Mr. Minassian received two requests from local media in order to interview him shortly after the offense. Mr. Minassian rejected both of these interview requests.

MENTAL STATUS EXAMINATION

Mental status observations were taken from all evaluations on various interview dates.

Mr. Minassian is a 27-year-old Canadian man of Iranian descent who appeared his stated age. He was of tall stature and slim build. He appeared well groomed and was dressed in an orange correctional uniform. His head was shaved. He maintained fixed eye contact throughout the evaluations that, at times, could be characterized as an intense stare. Mr. Minassian was cooperative with the interviews and appeared to answer questions with good effort.

Mr. Minassian's speech had a predominantly normal rate and volume, although the prosody was idiosyncratic and often monotone and flat. During psychological testing, Mr. Minassian often

tried to use verbal strategies to work his way through tasks. For instance, he read self-report measures aloud to himself and talked through why he chose his response. On nonverbal tasks on the WAIS-IV, he also talked his way through items that do not lend themselves to verbal discussion (e.g., visual-spatial tasks).

Mr. Minassian was verbose at times. He gave extremely lengthy responses when asked to define words. These responses provided detail that was not prompted by the question, and did not help his scores. The evaluator sometimes said "ok" or gave other indications that he could finish, but he did not respond to these prompts.

During interviews and testing, he demonstrated an unusual tendency to stick his tongue to his bottom lip and hold it there for several moments. This did not interfere with testing and attention, effort and concentration appeared adequate.

Mr. Minassian's affect, or observed emotion, was neutral, but appropriate for the situation. He denied symptoms consistent with psychotic illness, including auditory and visual hallucinations, thought insertion, ideas of references, paranoia, etc. However, his thought process was very concrete and inflexible. Mr. Minassian answered questions in a very concrete way, often requiring the interviewer to rephrase questions several times in order for him to answer. At times, Mr. Minassian would appear baffled and was unable to provide answers, despite being encouraged to take his time and consider the question. And many of his anwers were off the mark, with extraneous detail, or missing the point. Overall, it was our impression that despite the fact that he was not psychotic, his autistic way of thinking was severely distorted in a way similar to psychosis. There is support in the literature that autistic ways of thinking may distort reality as substantially as psychotic ways of thinking. For example, in a paper titled *Autism spectrum disorders: legal and forensic psychiatric aspects and reflections*, Kristiansson and Sorman (2008) write:

> The defendant was markedly preoccupied with fantasies concerning the victim, preoccupations that were so strong that they later developed into disturbances in perception and the internal representation of reality. This in turn resulted in severe mental impairment, very much like a psychosis…..The isolated and odd lifestyle of subjects with ASD/Asperger syndrome might lead to the development of a detached psychological structure sometimes nearly psychotic, with defective reasoning and a marked reduction of cognition.

Other abnormalities of thinking related to ASD were also apparent. By virtue of the severity of his social-cognitive deficits, he was not constrained by any understanding of the impact that his actions would have on his victims, their families, and his own family. The only time in our interviews when he seemed shocked and dismayed, was when he was asked whether he thought people would think of him as a "bully;" this aspect of his act, while obvious to others, did not occur to Mr. Minassian. This question caught him completely off guard, and he loudly answered "I'm not a bully, I hate bullies, how could anyone think that." Similarly, he failed to understand how others would be concerned about his future risk of violence.

Mr. Minassian did not endorse current suicidal or homicidal ideation, however he has endorsed suicidal ideation in the past, including shortly after his incarceration when, in custody, he drank a significant volume of shower soap.

Mr. Minassian was oriented to person, place, and time and was aware of the purpose of the evaluation. In order to obtain brief formal cognitive testing, a Montreal Cognitive Assessment (MOCA), was completed. Mr. Minassian scored 28/30, which didn't indicate any immediate issues.

Mr. Minassian showed adequate visuospatial and executive function skills. He was able to successfully complete a trail making test and copy a cube. In addition, he was able to draw a clock face following specific instructions.

Mr. Minassian was able to name three different animals after visually identifying them. His attention was intact; he could repeat a list of numbers forward and backwards, identify a specific letter along a string of other letters, and perform serial subtractions.

His language skills appeared adequate as he was able to repeat two different sentences and was able to spontaneously list twenty words starting with the letter F in one minute. His level of abstraction was adequate; he was able to state the similarities between pairs of objects.
Mr. Minassian showed some deficits in delayed recall; he was able to spontaneously recall three out of five words five minutes after they were initially introduced. Mr. Minassian was able to recall

one of the five words with a category cue, and was able to recall the last word after being given a multiple choice cue.

Mr. Minassian was able to interpret two common proverbs. In addition, Mr. Minassian was able to demonstrate a basic sense of social awareness. He said that the first person in a movie theater to see smoke or a fire should, "Pull the fire alarm and leave the theater. If other people are already leaving, go into the line with them and leave in an orderly fashion…" When asked what one should do if a person finds an envelope on the sidewalk that was sealed, addressed, and had a fresh stamp on it, he said, "bring it to the recipient" or "put it in the mailbox." He identified Martin Luther King as "the father of Martin Luther King, Jr" and later explained, "Martin Luther King, Jr. was the leading activist in African American civil rights movement during the 1960s.

PSYCHOLOGICAL AND PSYCHIATRIC TESTING

The overarching purpose of psychological and psychiatric testing was to corroborate Mr. Minassian's long standing diagnosis of Autism Spectrum Disorder, and to get a sense of the way in which he thinks, processes information, and otherwise interacts with the world. An additional purpose was to assess whether he has other conditions that may explain his actions, for example, psychopathy or malingering.

There are two defining features to ASD: social disability, and restricted and repetitive areas of interest and behaviors. The DSM V criteria for the disorder are listed below:

DSM V Criteria for Autism Spectrum Disorder

A. Persistent deficits in social communication and social interaction across multiple contexts, as manifested by the following, currently or by history:

1. Deficits in social-emotional reciprocity, ranging, for example, from abnormal social approach and failure of normal back-and-forth conversation; to reduced

sharing of interests, emotions, or affect; to failure to initiate or respond to social interactions.

2. Deficits in nonverbal communicative behaviors used for social interaction, ranging, for example, from poorly integrated verbal and nonverbal communication; to abnormalities in eye contact and body language or deficits in understanding and use of gestures; to a total lack of facial expressions and nonverbal communication.

3. Deficits in developing, maintaining, and understanding relationships, ranging, for example, from difficulties adjusting behavior to suit various social contexts; to difficulties in sharing imaginative play or in making friends; to absence of interest in peers.

B. Restricted, repetitive patterns of behavior, interests, or activities, as manifested by at least two of the following, currently or by history (examples are illustrative, not exhaustive; see text):

1. Stereotyped or repetitive motor movements, use of objects, or speech (e.g., simple motor stereotypies, lining up toys or flipping objects, echolalia, idiosyncratic phrases).

2. Insistence on sameness, inflexible adherence to routines, or ritualized patterns or verbal nonverbal behavior (e.g., extreme distress at small changes, difficulties with transitions, rigid thinking patterns, greeting rituals, need to take same route or eat food every day).

3. Highly restricted, fixated interests that are abnormal in intensity or focus (e.g., strong attachment to or preoccupation with unusual objects, excessively circumscribed or perseverative interest).

4. Hyper- or hyporeactivity to sensory input or unusual interests in sensory aspects of the environment (e.g., apparent indifference to pain/temperature, adverse response to specific sounds or textures, excessive smelling or touching of objects, visual fascination with lights or movement).

C. Symptoms must be present in the early developmental period (but may not become fully manifest until social demands exceed limited capacities or may be masked by learned strategies in later life).

D. Symptoms cause clinically significant impairment in social, occupational, or other important areas of current functioning.

E. These disturbances are not better explained by intellectual disability (intellectual developmental disorder) or global developmental delay. Intellectual disability and autism spectrum disorder frequently co-occur; to make comorbid diagnoses of autism spectrum disorder and intellectual disability, social communication should be below that expected for general developmental level.

The clinical descriptions of the disorder date back over a century. The diagnosis has become more widely recognized and understood in the last twenty years. ASD is a developmental condition that is generally present from infancy and has a strong genetic basis. Developmental conditions are static and permanent conditions, with pervasive effects on all aspects of adaptive function. Of note, ASD is different than Intellectual Disability even while they often co-occur. A person can have severe ASD even while they have completely normal intellectual function.

The section below is coded according to whether Rachel Loftin [RL], Alexander Westphal [AW], or Viviana Alvarez-Toro [VAT] conducted the testing.

Measures Administered

Autism Diagnostic Interview, Revised (ADI-R) [RL]
Autism Diagnostic Observation Schedule, Second Edition (ADOS-2) [RL]
Beck Anxiety Inventory (BAI) [RL]
Beck Depression Inventory, Second Edition (BDI-II) [RL]
Behavior Rating of Executive Function, Adult Version (BRIEF-A), Self and Observer [RL]
Conners' Adult ADHD Rating Scales, Short (CAARS), Self [RL]
Delis Kaplan Executive Function System (DKEFS), select subtests [RL]
Cambridge Behavior Scale (CBS) or Empathy Quotient (EQ) [AW]
Friendship and Relationship Questionnaire (FQ) [RL]
M-FAST/MALINGERING [AW]
MOCA [AW and VAT] (see Mental Status Examination section)
PCL-R/Psychopathy [AW]
Social Responsiveness Scale, Second Edition (SRS-2), Self and Relative [RL]
Vineland Adaptive Behavior Scales, Third Edition (Vineland-3), Comprehensive Caregiver [RL]
The Young Mania Rating Scale (YMRS) (RL)

Intellectual and Cognitive Functioning

WAIS-IV (RL). Mr. Minassian's intellectual abilities were measured using the *Wechsler Adult Intelligence Scale-Fourth Edition* (WAIS-IV), a standardized measure of intelligence. The Full Scale IQ score reflects general thinking and reasoning abilities and encompasses four indices: Verbal Comprehension, Perceptual Reasoning, Working Memory, and Processing Speed. Scores are reported as Standard Scores with an average of 100 and standard deviation of 15. Subtest scores are reported as Scaled Scores with an average of 10 and standard deviation of 3. Mr. Minassian's scores are reported in the table below:

Index Subtest	**Standard Score** Scaled Score	**Percentile**	**95% Confidence Interval**
Verbal Comprehension	**121**	**92**	**114 – 126**
Similarities	13	84	
Vocabulary	13	84	
Information	15	95	
Perceptual Reasoning	**98**	**45**	**91 – 105**
Block Design	11	63	
Matrix Reasoning	12	75	
Visual Puzzles	6	9	
Working Memory	**102**	**55**	**94 – 109**
Digit Span	8	25	
Arithmetic	13	84	
Processing Speed	**97**	**42**	**89 – 106**
Symbol Search	8	25	
Coding	11	63	
Full Scale	**107**	**68**	**102 – 112**
General Ability	**111**	**77**	**106 – 116**

Mr. Minassian's Full Scale IQ score of 107 was in the Average range of intellectual function (82nd percentile). However, the index scores that comprise this composite were scattered from Average to Superior. There was a 23 point difference, for instance, between his Superior Verbal Comprehension Index (VCI, 92nd percentile) and his Average Perceptual Reasoning Index (PRI, 45th percentile). Similarly, his VCI was 24 points higher than his Average Processing Speed Index (42nd percentile) and 19 points higher than his Average Working Memory Index (WMI, 55th percentile. Differences of this magnitude are rare and only occurred in 4.9% (VCI – PRI), 7.3% (VCI – PSI), and 8.2% (VCI – WMI) of the normative sample.

The General Ability Index (GAI) is calculated when an individual has significant discrepancies in his profile. This Index places reduced emphasis on WMI and PSI, although these factors still have some impact on an individual's overall ability. Mr. Minassian's GAI was in the Above Average range (77th percentile).

While such a scattered intellectual profile is rare in the general population, it is often observed in ASD and considered to be a contributor to cognitive processing challenges that tend to occur in ASD.

Performance on most subtests was at or above the Average range. It is worth noting a couple of particular strengths and deficits within Mr. Minassian's profile. His performance on the Information subtest was a relative and normative strength. This subtest required him to answer questions about general knowledge. He performed relatively poorly on the Digit Span and Symbol Search subtests and Below Average on the Visual Puzzles subtests.. Regarding Visual Puzzles, Mr. Minassian was generally able to complete items, which required him to decide which of six stimulus puzzle images fit next to each other by mentally rotating and reconstructing a stimulus puzzle. Mr. Minassian worked slowly when doing so. As a result, he did not receive credit for those items that exceeded the 30 second time limit. His speed of processing also appeared in impact performance on Symbol Search, where he scored at the lowest extreme of Average. Here, he had to work quickly to complete a simple pencil and paper task. Finally, on Digit Span, Mr. Minassian was required to recall and rearrange strings of

numbers, and he appeared to have relative difficulty keeping information in mind in order to do so.

D-KEFS (*RL).* Subtests from the *Delis Kaplan Executive Function System* (DKEFS) were administered to better understand how Mr. Minassian processes information. The DKEFS subtest scores are reported as scaled scores with a mean of 10 and standard deviation of 3.

Composite Condition	Scaled Score
Trail Making	
Visual Scanning	10
Number Sequencing	9
Letter Sequencing	12
Number-Letter Switching	13
Motor Speed	6
Number + Letter Sequencing	11
Number + Letter Sequencing v. Visual Scanning	8
Number + Letter Sequencing v. Number Sequencing	6
Number + Letter Sequencing v. Letter Sequencing	9
Number + Letter Sequencing v. Combined	8
Number + Letter Sequencing v. Motor Speed	3
Design Fluency	

Filled Dots	10
Empty Dots Only	10
Switching	9
Combined	10
Switching vs Combined	8
Word Context	
Total Consecutively Correct	14
Consistently Correct Ratio	13
Repeated Incorrect Responses	15

The majority of subtests of the DKEFS fell in the Average range or above. Mr. Minassian demonstrated challenges with Motor Speed on the DKEFS, and his performance was somewhat lower than on tasks that required motor speed on the WAIS-IV. There was no notable difference in effort. The Motor Speed condition was administered after a few other conditions, and it is possible that he fatigued.

Adaptive Behavior *(RL)*

The Vineland-3 is a standardized measure of adaptive behavior--the things that people do to function in their everyday lives. Whereas most psychological measures focus on what the examinee can do in a testing situation, the Vineland-3 focuses on what he actually does in daily life. Because it is a norm-based instrument, the examinee's adaptive functioning is compared to that of others his age. Mr. Minassian's parents completed the caregiver report form. The overall level of adaptive functioning is described by his score on the Adaptive Behavior Composite (ABC). The ABC score is based on scores for three specific adaptive behavior domains:

Communication, Daily Living Skills, and Socialization. Each domain score is comprised of subdomain scores.

The composite and domain scores are expressed as standard scores with a mean of 100 and standard deviation of 15. Subdomains are presented as V-Scale scores, which have a mean of 15 and standard deviation (*SD*) of 3.

Domain Subdomain	**Standard Score** *v*-Scale Score	**%ile**	**Age Equivalent (Years: Months)**
Communication	**82**	**12**	
Receptive	12		6:3
Expressive	13		8:3
Written	15		17:9
Daily Living Skills	**78**	**7**	
Personal	11		12:0
Domestic	13		15:3
Community	14		21:0
Socialization	**61**	**<1**	
Interpersonal Relationships	8		2:10
Play and Leisure	7		2:5
Coping Skills	12		7:9

ADAPTIVE BEHAVIOR COMPOSITE	**73**	**4**	

Mr. Minassian's adaptive skills were rated in the Moderately Low range of delay overall (Adaptive Behavior Composite, 4th percentile). This is markedly lower than his intellectual ability and suggests that his disabilities significantly impair his daily functioning. The difference between his full-scale IQ and adaptive function is more than two standard deviations.

Of the Domains that comprise the Vineland, the most challenge was reported in Socialization (<1st percentile). Mr. Minassian's interpersonal skills and leisure skills were rated extremely low, at the level of a very young child.

This profile of adaptive skills that are markedly lower than expectations based on intellectual ability and age is commonly seen in ASD.

Behavioral Regulation

CAARS-2. *(RL)* The *Conner's Adult ADHD Rating Scales- Second Edition- Self Report* (CAARS-2) is a measure of the presence and severity of ADHD-related symptoms. It is a rating scale with self-report and observer versions. The short version of the self-report was administered to Mr. Minassian. Scores are reported as T-scores with mean of 50 and standard deviation of 10. Scores from 45 to 55 are Average, 56 to 60 are Slightly Above Average, 61 to 65 are Above Average, 66 to 70 are Much Above Average, and 71 and above are Very Much Above Average.

Index Scale	**T-Score**
Inattention/Memory Problems	51
Hyperactivity/Restlessness	46

Impulsivity/Emotional Lability	38
Problems with Self-Concept	73
ADHD Index	**50**

Mr. Minassian's self-report of symptoms was within the Average range overall and on most scales. However, he endorsed Problems with Self-Concept in the Very Much Above Average range, while he rated his degree of Impulsivity/Emotional Lability as falling well below the Average range.

BRIEF-A. *(RL)* The BRIEF-A was also administered. It is a self-rating scale that provides an understanding of the individual's perspective with regard to their own difficulties with executive functioning tasks. Executive functions are a collection of higher order cognitive processes that help regulate behaviors effectively, including those behaviors important for learning in academic settings, and emotions. Validity scales raised no concerns regarding unusual negativity or inconsistency. The table below depicts scores, with higher scores indicating greater difficulty (T-score average = 50, SD = 10).

COMPOSITE/Index Subtest	**SELF** ***T*-Score**	**Percentile**	**PARENT** ***T*-Score**	**Percentile**
Behavioral Regulation Index	**46**	**37**	**52**	**63**
Inhibit	50	54	57	75
Shift	56	77	61	87
Emotional Control	38	15	47	50

Self-Monitor	50	56	51	60
Meta-Cognition Index	**50**	**56**	**62**	**85**
Initiate	47	44	65	93
Working Memory	56	76	52	67
Plan/Organize	54	69	67	93
Task Monitor	59	84	61	87
Organization of Materials	36	7	56	72
GLOBAL EXECUTIVE COMPOSITE	**48**	**44**	**58**	**78**

There were no validity concerns in either the self-report or the informant's report on the BRIEF-A. There were no missing responses in either the protocol, responses were not overly negative, and neither displayed atypical responding. Mr. Minassian's ratings were within the Average range. This suggests that Mr. Minassian perceives his fundamental self-regulatory abilities and metacognitive executive functions as within expectation, relative to his peers. His parents, in contrast, rated him in the Clinically Significant range on the Initiate and Plan/Organize scales. All other scales were rated within the Average range.

Mood and Emotion *(RL)*

BAI. Mr. Minassian completed the *Beck Anxiety Inventory (BAI)* to screen for more general anxiety symptoms. The BAI is a multiple choice inventory. Mr. Minassian's score on the BAI (9) was in the Mild range.

BDI-2. Mr. Minassian completed the *Beck Depression Inventory, Second Edition (BDI-2).* This is an individual measure of depression symptomatology. Mr. Minassian's score (raw score= 26) was in the Moderate range of depression.

YMRS. *The Young Mania Rating Scale* (YMRS) was administered. The YMRS was developed to evaluate mania symptoms. Mr. Minassian's score was not significant, suggesting that he was not experiencing mania symptoms at the time of evaluation. Additionally, when asked, he denied symptoms in the past as well.

ASD and Social Presentation

ADI-R *(RL).* Mr. Minassian's parents, [redacted] and [redacted] Minassian, participated in an interview about his history. The interview included administration of the *Autism Diagnostic Interview, Revised* (ADI-R). The ADI-R is a comprehensive developmental interview that is an important component of a gold standard evaluation for autism. The ADI-R can be scored using an algorithm, which gives categorical results in three domains: Language/Communication, Reciprocal Social Interactions, and Repetitive Behaviors/Interests. The information from the ADI-R is incorporated into the DEVELOPMENTAL HISTORY section of this report. In summary, Mr. Minassian's parents' descriptions of his early history and current presentation met instrument classification of Autism in all three areas: Language/Communication, Reciprocal Social Interactions, and Repetitive Behaviors/Interests.

SRS-2 *(RL).* Mr. Minassian and his father were both asked to complete the *Social Responsiveness Scale, Second Edition* (SRS-2) to gather information about his social presentation in the home and community. Ratings are tallied and an overall T-score is calculated. Scores below 59 are considered within normal limits, 60-65 indicates mild concerns, 66-75 are moderate concerns, and scores above 76 are considered severe concerns.

Index Subscale	**T-Score** **Self-Report**	**T-Score** **Relative Report**

Social Awareness	52	64
Social Cognition	70	74
Social Communication	72	77
Social Motivation	69	74
Social Communication & Interaction	**70**	**76**
Restricted Interests and Repetitive Behaviors	78	77
Restricted Interests & Repetitive Behaviors	**78**	**77**
SRS TOTAL SCORE	**72**	**77**

Overall ratings, as measured by the SRS Total Score, were elevated in both reports. Mr. Minassian's self-report was Moderately Elevated, and his parents' report was in the Severe range. Scores in the Moderate range indicate deficiencies in reciprocal social behavior that are clinically significant and lead to substantial interference with everyday social interactions. Such scores are typical for individuals with ASD of moderate severity. Scores in the Severe range indicate deficiencies in reciprocal social behavior that are clinically significant and lead to severe and enduring interference with everyday social interactions. Such scores are strongly associated with a clinical diagnosis of an autism spectrum disorder.

Both the Social-Communication and Restricted Interests and Repetitive Behavior Index scores were elevated for both reporters. Mr. Minassian and his parents rated his Restricted Interests and Repetitive Behavior as Severe, while he rated his Social-Communication as Moderate and his parents rated it Severe.

FQ *(RL).* The *Friendship and Relationship Questionnaire (FQ),* a self-report questionnaire, was administered to learn more about Mr. Minassian's social relationships. Respondents who score high on the FQ report that they value close, supportive, caring, and empathic relationships.

People with ASD tend to obtain lower scores (see Baron-Cohen & Wheelwright, 2003). The FQ is not a norm-referenced measure. Rather, it can be used as an adjunct to diagnostic tools, in order to provide more detailed information about social functioning.

Mr. Minassian's responses on the FQ indicated some interest in social relationships. Despite this interest, he had not participated in a social activity in the community in over a year, and he expressed little interest in several activities that are crucial to friendship, such as sharing significant news, supporting each other, and staying in touch. Mr. Minassian endorsed preferring activity and interest-related activities with friends, rather than conversation and less structured get-togethers.

ADOS-2 *(RL).* The *Autism Diagnostic Observation Schedule, Second Edition* (ADOS-2) was administered to learn more about Mr. Minassian's social and communication presentation. The ADOS-2 is a semi-structured interview and social session that assesses specific reactions to social, communicative, and emotional presses. Use of the ADOS-2, together with a comprehensive developmental history, is considered the gold standard for assessing symptoms of ASD.

There are five modules of the ADOS-2, each specific to an age range and level of language skill. Module 4 of the ADOS-2 was administered to Mr. Minassian. This module was designed for use with older teens and adults with fluent speech. Module 4 includes opportunities for conversation with the examiner, as well as questions about emotions, friendships and daily activities.

Mr. Minassian was quite verbal and had no difficulty in basic communication. However, his communication was awkward and lacking in social qualities. Speech was overly formal. Conversation was pleasant at times but felt one-sided, in that Mr. Minassian responded to questions and comments, but he did not inquire about the evaluator or build on her comments. Mr. Minassian also tended to speak at excessive length about certain topics and was not responsive to direct nonverbal cues that the listener was not interested (such as looking down and away, stopping discourse markers). In those moments, he proceeded without appearing to register the social cues. Use of language for problem solving was also concerning. In one

instance, Mr. Minassian was asked to complete a puzzle but was given an inadequate number of pieces to do so, and the evaluator explicitly stated that he should let her know if he needs more. When he used up his pieces and required more, Mr. Minassian said, “It’s missing pieces.” The evaluator paused to give him an opportunity to request more. He neither looked at her nor made a request. This is significant, as it shows the absence of very basic social-communication skills, despite very sophisticated use of language in other contexts. (This presentation was consistent with Mr. Minassian’s failure to self-advocate during the modified use of 20 Questions when he did not speak up.)

In terms of nonverbal communication, Mr. Minassian used some gestures for descriptive and emphatic purposes. His gestures tended to be rather awkward and exaggerated. Facial expression was quite flat. Eye contact was often present, but he sometimes looked away during key moments of interaction, such as when requesting items.

Mr. Minassian discussed having had only one true friend, with whom he has not had contact since about 2016. Responses to questions about social insight were largely adequate, as would be expected from Mr. Minassian’s verbal intelligence. (That is, many intelligent adults with ASD can give correct answers about social relationships when questioned in testing but are not necessarily able to demonstrate skills in real life situations.) However, when asked about emotional insight, challenges were evident. Mr. Minassian was able to describe situations that elicit different emotions, but his description of his physiological sensation of different emotions was largely limited to “hot” and “cold”. He did not describe other bodily sensations, only the temperature he associates with the emotion.

No unusual sensory behaviors or repetitive movements were noted other than a frequent movement in which Mr. Minassian placed his tongue on top of his bottom lip and held it there for several moments. Overall, Mr. Minassian’s performance on the ADOS-2 was in the instrument classification range of Autism.

Communication Press. *(RL)* In order to elicit social problem-solving behavior, Mr. Minassian was administered a “dummy” subtest in which he was presented with a task he was familiar with

(20 Questions from the DKEFS, which had been previously administered by the prosecution's expert). In this task, the evaluator picks an item from an array, and the client asks questions which can be answered with yes/no in order to figure out what the evaluator chose. In this case, the evaluator did not provide accurate responses, so that Mr. Minassian had no discernable solution. A typically developing person of Mr. Minassian's intelligence would make a statement or ask a question to indicate that he was stuck. Mr. Minassian did not do this, however. He sat quietly without saying anything.

EQ/The Empathy Quotient *(AW).* The Empathy Quotient (EQ) is a self-report questionnaire developed to assess a person's cognitive and emotional empathy, the understanding of what others are feeling and why, and how one is affected by these feelings. The empathy measurements provided by the EQ are used by mental health professionals as an adjunct in assessing the level of social impairment in certain disorders like ASD (when diagnoses have been established with other tools.) However, since levels of empathy vary significantly between individuals, even between those without any mental health disorders, it is also suitable for use as a casual measure of temperamental empathy for the general population. Scores at or below 30 are considered suggestive of a possible autism spectrum disorder.

Mr. Minassian's score of 22 (typical is above 30) indicates that he has significant empathy deficits. Just as a few examples, he answered questions like, "I can tell if someone is masking their true emotion," 'I tend to get emotionally involved with a friend's problems," with "strongly disagree, and "If anyone asked me if I liked their haircut, I would
reply truthfully, even if I didn't like it," and "I usually stay emotionally detached when watching a film" with "strongly agree."

Mr. Minassian's score indicated empathy deficits, even while the cause of the deficits was not defined by this test. Empathy deficits are found in several conditions. In Mr. Minassian's case, the most relevant conditions are ASD and psychopathy. It was our clinical assessment that ASD explains his empathy deficits. Psychopathy, and our rationale for excluding it from his diagnoses, is discussed in more detail in the next section.

Psychopathy

PCL-R/Psychopathy Checklist - Revised *(AW).* Because of the nature of Mr. Minassian's offense we considered the possibility that he might have a psychopathic, sociopathic or antisocial personality. To address this, we administered the PCL-R (Psychopathy Checklist – Revised). The PCL-R is a psychological assessment tool used to assess the presence of psychopathy in individuals. Mr. Minassian's score, 13, was well below the cutoff for psychopathy. He has various traits, including a shallow affect and a lack of remorse that are consistent with psychopathy. But he also lacked other characteristics of psychopathy, for example, superficial charm and conning, manipulative behavior. In addition, some of his positive scores on the test could equally well be explained by ASD. There is a research literature which describes elevated PCL-R scores in the population with ASD based on the overlap of certain characteristics of the disorders. For example, see Lockwood, et al., 2013.

Malingering

M-FAST/MALINGERING *(AW).* As is customary in forensic evaluations, we considered the possibility that Mr. Minassian was malingering symptoms of psychiatric illness or developmental disability as a way to avoid responsibility for his actions. However, his psychiatric presentation was both idiosyncratic and subtle in a way that convinced us that it was not malingered. Furthermore, his score on the M-FAST, a formal screening for malingering, did not suggest that he was exaggerating or inventing symptoms.

CONCLUSION

At the request of defense counsel, a team comprised of Alexander Westphal, MD, PhD; Rachel Loftin, PhD; and Viviana Alvarez-Toro, MD, conducted a forensic psychiatric and psychological assessment of Mr. Alek Minassian, an inmate at the Toronto South Detention Centre who has been charged with ten counts of first degree murder and sixteen counts of attempted murder. The assessment included reviewing records; interviewing family members; taking a developmental, medical and psychiatric history; and conducting specialized psychiatric and psychological testing. The purpose of the assessment was to confirm Mr. Minassian's long-standing diagnosis of Autism Spectrum Disorder (ASD) and to determine whether it was relevant

to the act of mass violence he committed on April 23, 2018. As part of this process, we also assessed whether Mr. Minassian has other conditions that are relevant to his actions.

The diagnostic criteria for ASD are described in the psychological testing section of this report. ASD is a genetic neurodevelopmental condition that causes severe social disability, undermining a person's ability to navigate even basic social situations. It is also characterized by restricted and repetitive patterns of behavior. Mr. Minassian was first diagnosed with ASD (as Pervasive Developmental Disorder) at the age of five on the basis of poorly developing social skills and a regression of developmental milestones. In addition, his early developmental history was notable for speech delays and repetitive behaviors (including self-injurious behaviors) all of which suggest ASD.

Mr. Minassian's parents pursued many interventions and supports for him over the years. It is likely that these supports were helpful with the development of his basic skills. However, it is important to point out that he has never received individual psychotherapy. Specific therapy models, such as cognitive-behavioral therapy, have demonstrated effectiveness in ASD and may have benefited him. There is also no evidence that Mr. Minassian received targeted social cognitive interventions. Indeed, this is an area of recent progress in the ASD field, and most social cognitive interventions that are now used were not available when he was in school. It is likely, given his intelligence and ability to retain information, that he would have benefited and developed more substantial social cognition (this includes empathy and perspective taking) if he had received such interventions.

Over time, the effects of Mr. Minassian's ASD were most apparent in his social relationships. No single social style by itself completely defines ASD. Some people with the disorder may have no interest in typical social interactions and live in relative isolation. Others may pursue social and romantic relationships but lack the interpersonal skill and insight to do this successfully. In Mr. Minassian's case, he was socially motivated, but unable to establish and maintain typical social and romantic relationships. He was described as socially awkward and lived a very isolated life, but for his interactions with his family and a couple of friends. He had no romantic relationships.

In addition, Mr. Minassian's history of restricted interests is also consistent with ASD. As described by both Mr. Minassian and his parents, he dedicated most of his time to activities which were of interest to him. Throughout different developmental stages, Mr. Minassian's behavior and focus centered around specific themes such as math, Mr. Bean, exercise videos, video games, and fringe online groups.

At the time of our assessment, Mr. Minassian met diagnostic criteria for ASD. The finding of ASD was consistent across the two gold standard measures of autism, the ADOS-2 and ADI-R, as well as the clinical judgment of clinicians with extensive training and experience in autism. Further, parent ratings and interviews about autism symptomatology were consistent with data collected via direct assessment and clinical judgment. In summary, Mr. Minassian clearly has ASD.

Mr. Minassian's cognitive profile is notable for superior verbal processing, in comparison to other domains which are largely within the average range. The disparity between excellent verbal abilities and lower performance in many other domains means that Mr. Minassian's use of language may mask his challenges. Coupled with the social deficits inherent in autism, this profile results in someone who has difficulty appreciating his listener's needs and tends to speak at great length without recognizing what information is most relevant. He does not have the social cognitive skills to appreciate what his listener needs to hear. Additionally, he is not able to filter what he says, something which depends on understanding others' internal experiences, and, in turn, the way in which what he says could be perceived. This was very evident in the candor with which he spoke about his violent actions and his attitude towards them now.

The gap between high intellectual ability and poor functioning in everyday life is commonly observed in ASD. In Mr. Minassian's case, he can function at or above normal level in many intellectual tasks. At the same time, his communication in everyday settings is more like that of a child, and his skills in social relationships are even lower. The difference between his intellect, which is often described as one's "potential" for achievement, and his actual functioning is vast. Mr. Minassian was aware that he experienced repeated failures in work and social contexts, but

had little insight into the underlying skills deficits which were responsible for his poor achievement. To him, this dissonance between what he knew he was capable of and what he actually achieved seemed insurmountable and caused significant distress.

Other characteristics of Mr. Minassian's behavior support the diagnosis of ASD and are also relevant to his actions on April 23, 2018. He has a rigid and concrete thinking style. His thinking is intellectualized; out of touch with emotional experience. He has difficulty understanding and taking the perspectives of other people, which can play out in the sort of empathy deficit identified during our interviews. This type of deficit in the cognitive or intellectual aspect of empathy is known as a "theory of mind" deficit. A central theory in autism is that theory of mind deficits, or *mindblindness*, is the root of social difficulties. This means that people with ASD have difficulty understanding that others have internal states that differ from one's own and have difficulty attributing mental states (beliefs, desires, and intentions) to others. The extent of the theory of mind deficit varies by individual with ASD, but the testing indicates that it is very marked in Mr. Minassian's case.

When taking into consideration Mr. Minassian's history and examining Mr. Minassian's initial explanation for his actions to the police, various inconsistencies arise. Throughout his police interrogation, which mirrors his Facebook post immediately before the attack, Mr. Minassian highlights how the intent of his actions was to ignite an "Incel Rebellion" to "overthrow all the Chads and Stacys." This explanation has multiple problems.

For example, Mr. Minassian had never indicated any animosity towards 'Chads' or 'Stacys' before the index event. He had never told anyone that he was upset about feeling left out of relationships, and did not have failed attempts to initiate relationships. In addition, aspects of both his story to the police, and specific phrases and word choices he used were lifted from Elliot Rodger, the self-identified *incel* who killed six people in Isla Vista, California on May 23, 2014. When asked about this, Mr. Minassian acknowledged that he had used Elliot Rodger's explanation "to spice it up" because he thought that people wouldn't be interested in or "know him" otherwise.

No doubt Mr. Minassian's plan was conceived in the context of his saturation with provocative, hate-filled material on the internet. ASD made him less able to appreciate the theatrical, exaggerated nature and extremeness of the material, or the dark humor behind some of it. He took it very literally. And clearly Mr. Minassian copied multiple aspects of Elliot Rodger's attack. One of the diagnostic characteristics of ASD, restricted and repetitive patterns of behavior, can express itself in mimicry, something Mr. Minassian had a history of doing (e.g., reenacting dance videos.) However given the fact that the overarching rationale seemed to be plagiarized, and without precedent in his life, juxtaposed against the act's extreme nature, the *incel* account falls short as a complete explanation.

One hypothetical motive for the attack, which we do not accept, is that Mr. Minassian was seeking revenge for something in his past. Among other things, Mr. Minassian was bullied in school and felt socially rejected. He had a number of reasons to be angry and disaffected. And he had limited emotional experience and almost no insight into his own emotional states. He did not have the skills to identify and communicate how he was feeling, and even now, cannot make connections between his behavior and his emotional experiences. However, in this explanation, you would expect Mr. Minassian to have previously expressed anger in some form. His family all deny that he ever said anything that suggested he was harboring anger towards anyone and he has no history of previous angry outbursts (other than as a young child) or violence. In addition, in this explanation, you would expect his target to have been more specific, somehow related to his source of anger. For example, he could have chosen to attack one of the schools he attended, but he did not.

A related hypothetical motive, which we also reject, is that Mr. Minassian was taking revenge on the military for something that happened during his brief enlistment and discharge, or for the fact that his military aspirations failed. This is suggested by the military references in his Facebook post and by the proximity of his attack to the recruitment office where he enlisted in the army. However, according to the military documentation, Mr. Minassian initiated his separation from the military and received an honorable discharge, and there is no record that he subsequently expressed a grievance against the military. Furthermore, he drove past the building which

houses the recruitment office without driving on the sidewalk and did not appear to target anyone in the immediate area surrounding the building. In our interviews, he denied this as a motive.

This leaves the question of what motivated the attack. Mr. Minassian has identified several factors. Chief among these were two reasons: his concern about failing socially at his new job (which he had not started); his desire for notoriety measured by achieving a "high kill count" on Encyclopedia Dramatica.

These seem like particularly insubstantial reasons to inflict such an enormous amount of pain, and to either end his own life, or, at least, guarantee that he spent the rest of it incarcerated. Furthermore, Mr. Minassian had significant difficulty identifying what he was specifically anxious about regarding "failing socially" at work. He was not able to explain how these instances would be different from his previous social interactions or why they presented such a threat to him. With regards to his claims of conducting these violent acts for the purpose of notoriety, it is important to note that, when given the opportunity to speak with reporters, Mr. Minassian refused their invitations.

All of these inconsistencies raise the question of whether Mr. Minassian was capable of understanding the impact and consequences of what he was doing. He knew that from a legal standpoint what he was planning was wrong and that he would be held accountable. He certainly understands the wrongfulness of his actions on an *intellectual* level. This understanding, may, to some degree, reflect the education he received about the legal system in high school. On the other hand, there are several things that suggest that Mr. Minassian did not appreciate the *moral* wrongfulness of his actions.

1) When asked about the impact that his actions had on the lives of his victims, their families, and his own family members, Mr. Minassian demonstrated a complete lack of insight.

2) He described his actions as "converting the life status to death status" of his victims, in a manner that suggests that he was describing a video game, again suggesting a complete emotional detachment from his actions.

3) He did not describe any substantial emotional experience during the rampage, and was described by witnesses as looking straight ahead during the attack. Afterwards, he did not exhibit any emotion during the police interview.

4) He simultaneously planned for the future in very prosaic ways, while also planning the attack: he filled out 'onboarding' paperwork for his new job the day of the attack; he petitioned his father to widen their driveway so it could accommodate another car which he hoped to buy the week before the attack; he made plans with his brother to go bowling and get sushi a few days after he graduated.

5) While incarcerated and speaking with his family, Mr. Minassian was optimistic about the prospect of going home after trial, given that he believed others would be able to see that he "didn't do anything wrong."

Mr. Minassian explained that he continued to do ordinary, future oriented things in case the attack didn't work out. This suggests that he was weighing the attack and his subsequent suicide as an ordinary event, balanced against other ordinary events in his life. This supports the theory that he did not truly understand the impact or consequences of his actions. Perhaps these were also strategies to cover up his plans, but the idiosyncratic nature of them suggests more that he was simultaneously planning the attack and expecting, on some level, for life to continue as normal.

For him to simultaneously expect that he would carry out the attack and that life would continue as normal suggests that his thinking was distorted, in the same way that someone's thinking can be distorted in the context of psychotic delusions. As discussed in the MENTAL STATUS EXAMINATION section of this report, there is support in the literature for the idea that autistic ways of thinking may distort reality as substantially as psychotic ways of thinking. For example,

in a paper titled *Autism spectrum disorders: legal and forensic psychiatric aspects and reflections*, Kristiansson and Sorman (2008) write:

> The defendant was markedly preoccupied with fantasies concerning the victim, preoccupations that were so strong that they later developed into disturbances in perception and the internal representation of reality. This in turn resulted in severe mental impairment, very much like a psychosis…..The isolated and odd lifestyle of subjects with ASD/Asperger syndrome might lead to the development of a detached psychological structure sometimes nearly psychotic, with defective reasoning and a marked reduction of cognition.

In addition, features of ASD are sometimes misdiagnosed as psychotic symptoms, with difficulties in reading others' intentions resembling paranoia, difficulties in expressive communication resembling thought disorder, and 'melt downs' resembling catatonia. (Lai, 2015.)

Aside from the effects that ASD may have had on Mr. Minassian's relationship with reality, it would have had other effects on his thinking. By virtue of the severity of his social-cognitive deficits, he was not constrained by any understanding of the impact that his actions would have on his victims, their families, and his own family. The only time in our interviews when Mr. Minassian seemed shocked and dismayed, was when he was asked whether he thought people would think of him as a "bully;" this aspect of his act, while obvious to others, did not occur to him. Similarly, he failed to understand how others would be concerned about his future risk of violence.

While our assessment indicates that Mr. Minassian has very substantial problems with empathy, it is our assessment that this was driven by ASD rather than psychopathy. We administered the PCL-R, sometimes called the Hare or the Psychopathy Checklist. His score on that was below the cutoff for psychopathy. He did score positively for more aspects of psychopathy than typical, but the characteristics of psychopathy which raised his score were ones which can equally be explained by ASD. Examples are lack of empathy, shallow affect, and a grandiose sense of self-worth. On the other hand, many of the aspects of psychopathy he did not score high on, for example: glibness/superficial charm, conning/manipulative, and criminal versatility are

aspects of psychopathy which don't overlap with ASD.

Furthermore, he showed no developmental signs of psychopathy, other than deficits in cognitive empathy and limited affective expression (which are core features of ASD). He had no history of violence, callousness, or manipulation. His empathy deficits are also somewhat different from the type of empathy deficit associated with psychopathy. Psychopaths with normal intelligence do not typically show deficits in social-cognitive empathy, *mindblindness*, but instead are often very adept at using what they read in others to manipulate them. *Mindblindness* is precisely the deficit in Mr. Minassian's social presentation (as evidenced in results from multiple tests, including the SRS-2, ADOS-2, and ADI-R). He struggles to predict what others are thinking and feeling and why.

In summary, it is our opinion that without ASD Mr. Minassian would not have perpetrated this offense. ASD undermined his social, academic, and occupational development, creating loneliness and a conviction that he would fail at anything he tried. This was reinforced by his experiences, in particular, his failure in the military and at successful social relationships. Most importantly, Mr. Minassian's actions reflect that he did not, and does not, have any understanding of the actual, real life impact of his actions on his victims, his victims' families and friends, and his own family, a direct consequence of ASD.

We conclude that although Mr. Minassian understood the wrongfulness of his actions from an *intellectual* standpoint, he did not understand the wrongness of his actions from a *moral* standpoint. How can someone with his intellectual ability and the planning capacity not understand the *moral* consequences of their actions? *Moral* consequences are those that correspond to the effect on people and values and meaning of events. These are the very areas that ASD impairs. His attack on the people did not represent his intense feeling of rage or any desire for revenge. Rather it was an act similar to playing a videogame, with a certainty of at least some success, and the tangible metric of a final score tallied on *Encyclopedia Dramatica*.

The act was also completely beyond his comprehension, given his absence of understanding of emotional nuance, social exchange, and contextual accommodation. He had absolutely no insight

into the terrible impact that the act would have on other beings, and did not think about the pain he was bound to cause, nor understood it, even slightly, now. Understanding this fragmentation of mind, or distortion of thinking, that is necessary for him to both understand his actions from an *intellectual* standpoint, but not from a *moral* one, is almost impossible for a typical person (with an unfragmented mind). It is related to, but more difficult than understanding what it must be like to be blind or deaf for sighted persons and those who hear. And the deficit in ASD is as profound; it involves the failure of the intricate integration of thought, mind, and emotion that is present from earliest development and is so woven into the being of a typical person that they are not even aware it is there. In Mr. Minassian's case, this system and its associated capacities were completely broken.

Sincerely,

Alexander Westphal, MD, PhD

Viviana Alvarez-Toro, MD

Rachel Loftin, PhD

APPENDIX 1 - BIBLIOGRAPHY

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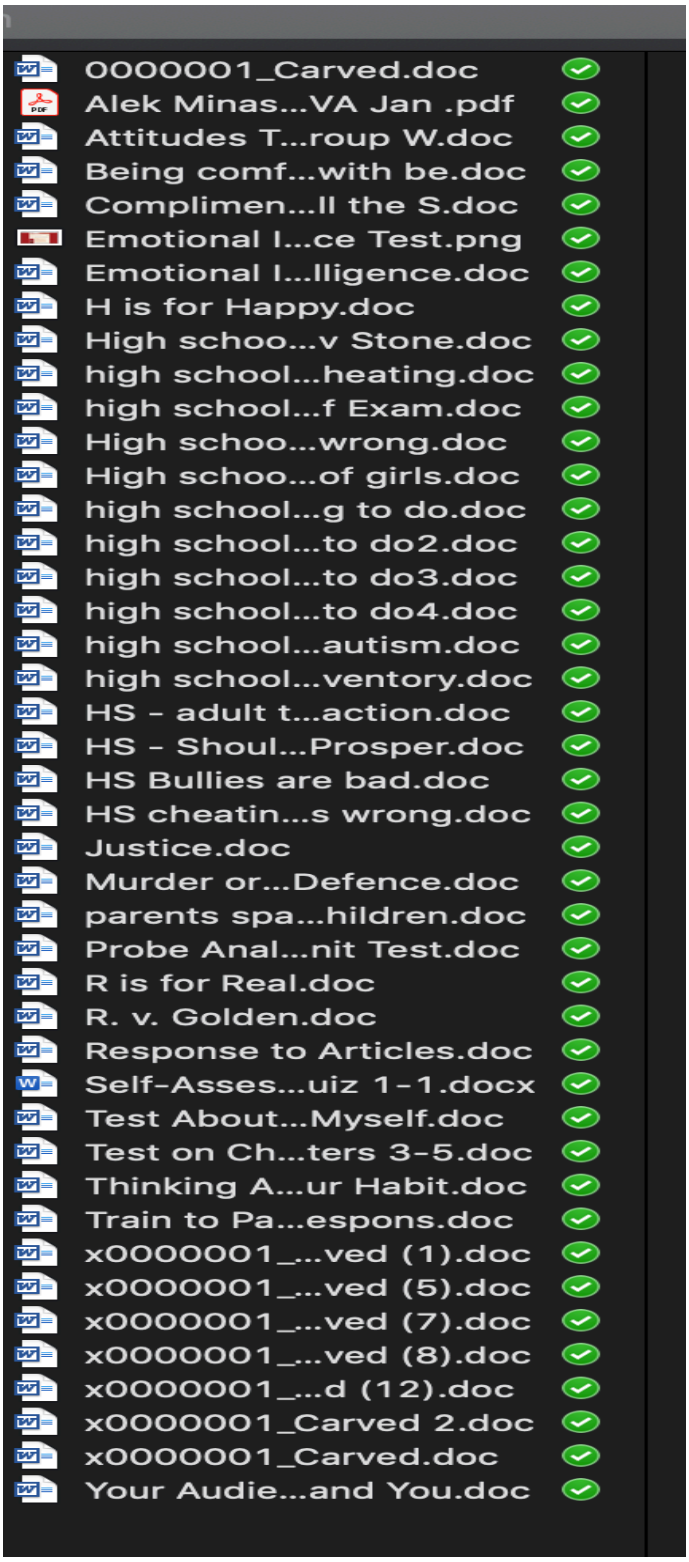
APPENDIX 2 – COMPUTER RECORDS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High schoo...v Stone.doc
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high school...autism.doc
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HS - adult t...action.doc
HS - Shoul...Prosper.doc
HS Bullies are bad.doc
HS cheatin...s wrong.doc
Justice.doc
Murder or...Defence.doc
parents spa...hildren.doc
Probe Anal...nit Test.doc
R is for Real.doc
R. v. Golden.doc
Response to Articles.doc
Self-Asses...uiz 1-1.docx
Test About...Myself.doc
Test on Ch...ters 3-5.doc
Thinking A...ur Habit.doc
Train to Pa...espons.doc
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